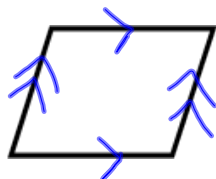


8-2 Parallelograms

Parallelogram-quadrilateral with both pairs of opposite sides parallel



Theorem 8.3-Opposite sides of a parallelogram are congruent



Theorem 8.4-Opposite angles of a parallelogram are congruent



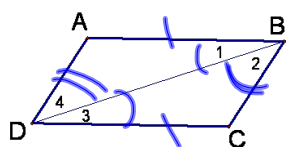
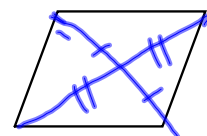
Theorem 8.5-Consecutive angles of a parallelogram are supplementary



Theorem 8.6-If a parallelogram has one right angle, then it has four right angles.

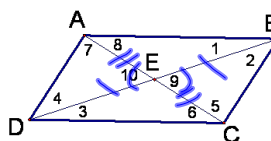


Theorem 8.7-Diagonals of a parallelogram bisect each other



Given: $\square ABCD$
Prove: $\triangle ABC \cong \triangle CDB$

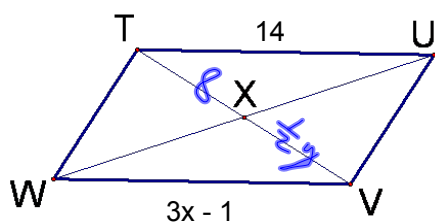
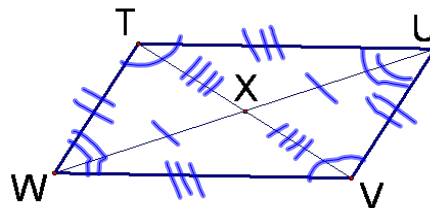
AAS



Given: $\square ABCD$
Prove: $\triangle AED \cong \triangle CEB$

SAS

Theorem 8.8-Each diagonal of a parallelogram separates it into two congruent triangles



$$\begin{aligned} TX &= 8 \\ XV &= .5y \end{aligned}$$

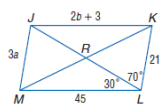
$$y = 16$$

$$\begin{aligned} H &= 3x - 1 \\ 5 &= x \end{aligned}$$

HW
p. 414-415
7-12, 16-31

Use $\square JKLM$ to find each measure or value if $JK = 2b + 3$ and $JM = 3a$.

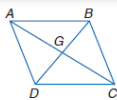
7. $m\angle MJK$
8. $m\angle JML$
9. $m\angle JKL$
10. $m\angle KJL$
11. a
12. b



Find the point where the diagonals intersect.

Complete each statement about $\square ABCD$. Justify your answer.

16. $\angle DAB \cong$?
17. $\angle ABD \cong$?
18. $\overline{AB} \parallel$?
19. $\overline{BG} \cong$?
20. $\triangle ABD \cong$?
21. $\angle ACD \cong$?



ALGEBRA Use $\square MNPR$ to find each measure or value.

22. $m\angle MNP$
23. $m\angle NRP$
24. $m\angle RNP$
25. $m\angle RMN$
26. $m\angle MQN$
27. $m\angle MQR$
28. x
29. y
30. w
31. z

